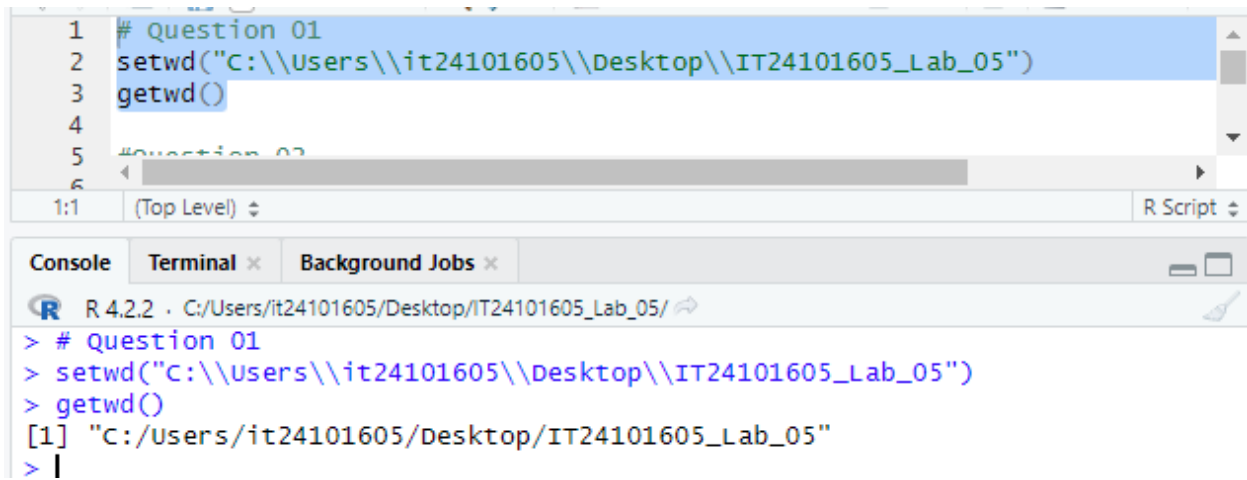


IT24101605
Fernando C.H.A.C.
PS Lab Sheet 05

Exercise

1. Import the dataset ('Exercise-Lab 05.txt') into R and store it in a data frame called "Delivery_Times".



```
1 # Question 01
2 setwd("C:\\Users\\it24101605\\Desktop\\IT24101605_Lab_05")
3 getwd()
4
5 #Question 02
6
```

1:1 (Top Level) R Script

Console Terminal Background Jobs

```
R 4.2.2 C:/Users/it24101605/Desktop/IT24101605_Lab_05/
> # Question 01
> setwd("C:\\Users\\it24101605\\Desktop\\IT24101605_Lab_05")
> getwd()
[1] "C:/Users/it24101605/Desktop/IT24101605_Lab_05"
> |
```

2. Draw a histogram for deliver times using nine class intervals where the lower limit is 20 and upper limit is 70. Use right open intervals.

```
#Question 02
Delivery_Times<-read.table("Exercise - Lab 05.txt",header=TRUE)
print(Delivery_Times)

hist(Delivery_Times$Delivery,
      breaks = seq(20, 70, by = 5),
      right = FALSE,
      main = "Histogram of Delivery Times",
      xlab = "Delivery Times",
      ylab = "Frequency",
      col = "lightgreen",
      border = "black")

hist_data <- hist(Delivery_Times$Delivery,
                  breaks = seq(20, 70, by = 5),
                  right = FALSE,
                  plot = FALSE)
```

```

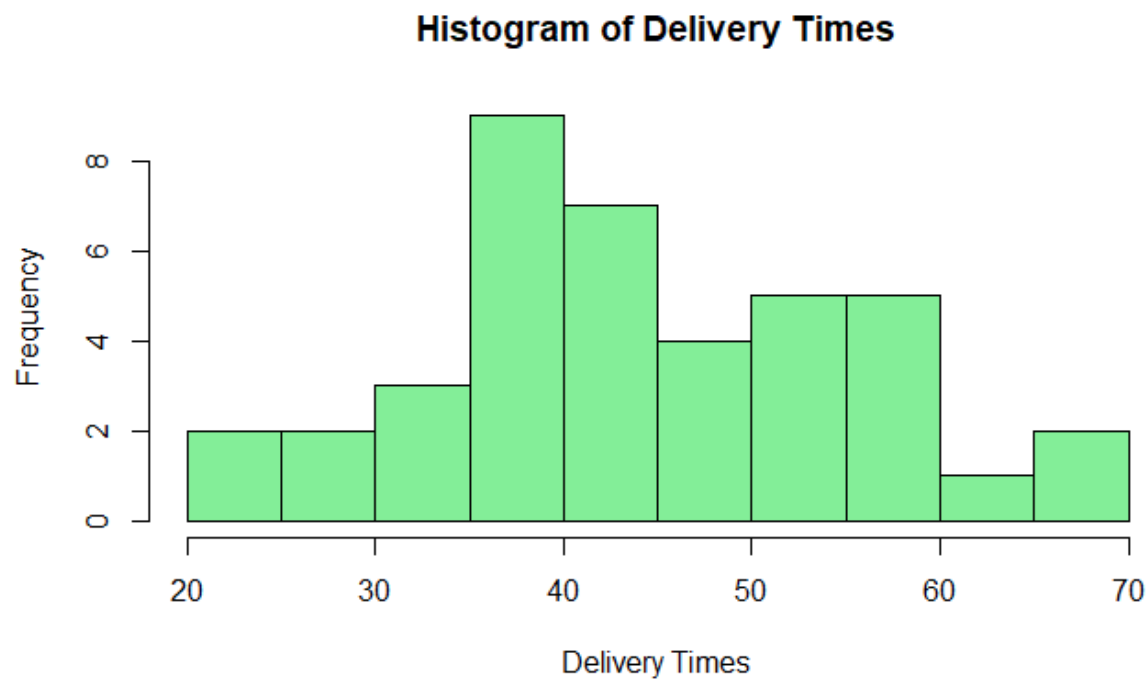
> Delivery_Times<-read.table("Exercise - Lab 05.txt",header=TRUE)
> print(Delivery_Times)
  Delivery_Time_.minutes.
1                    34
2                    54
3                    47
4                    29
5                    39
6                    61
7                    20
8                    40
9                    57
10                   36
11                   38
12                   44
13                   59
14                   38
15                   40
16                   40
17                   67
18                   66
19                   55
20                   48
21                   52
22                   59
23                   35
24                   56
25                   32
26                   38
27                   54
28                   30
29                   43
30                   36
31                   42
32                   20
33                   27
34                   38
35                   54

```

```

> hist(Delivery_Times$Delivery,
+      breaks = seq(20, 70, by = 5),
+      right = FALSE,
+      main = "Histogram of Delivery Times",
+      xlab = "Delivery Times",
+      ylab = "Frequency",
+      col = "lightblue",
+      border = "black")
> hist_data <- hist(Delivery_Times$Delivery,
+                   breaks = seq(20, 70, by = 5),
+                   right = FALSE,
+                   plot = FALSE)

```



3. Comment on the shape of the distribution.

#Question 03

#The distribution appears to be slightly right-skewed with a peak around 35-40 minutes.

|

4. Draw a cumulative frequency polygon (ogive) for the data in a separate plot.

#Question 04

```
cumulative_freq <- cumsum(hist_data$counts)
```

```
plot(hist_data$mids, cumulative_freq,  
     type = "o",  
     main = "Cumulative Frequency Polygon (Ogive)",  
     xlab = "Delivery Times",  
     ylab = "Cumulative Frequency",  
     pch = 16,  
     col = "blue")
```

```
> cumulative_freq <- cumsum(hist_data$counts)  
> plot(hist_data$mids, cumulative_freq,  
+      type = "o",  
+      main = "Cumulative Frequency Polygon (Ogive)",  
+      xlab = "Delivery Times",  
+      ylab = "Cumulative Frequency",  
+      pch = 16,  
+      col = "blue")
```

